

Work Order ID 100850

100850

Page 1

May-01-13 7:30:34 AM

Item ID: D4103-1

Accept

N900040100

Setup Start *NS1*

Revision ID:

Stop *NS2*

Item Name: Step / Handle

Start Date: 4/25/13 Start Qty: 5.00 *5*

Cust Item ID:

Required Date: 4/30/13 Req'd Qty: 5.00 *5*

Customer:

Reference:

Approvals: Process Plan: MLJ Date: 13-05-03 Tooling: _____ Date: _____

Run Start *NR1*

QC: _____ Date: _____ SPC (Y/N): _____ Date: _____

Stop *NR2*

Sequence ID/ Work Center ID	Operation Description	Set Up/ Run Hours	Tool ID	Tool #	Plan Code	Accept Qty	Reject Qty	Reject Number	Insp. Stamp
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Draw Nbr	Revision Nbr
D4103	A

100	Cut blanks as per folio	0.00
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100

Bandsaw	Memo	0.00
Jeaspa Bandsaw	6.200" long	

#6 SLB-B-B

110		0.00
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110

HAAS 1	Memo	0.00
HAAS CNC vertical machine #1	Mill as per dwg and Folio FA937	
	DEBURR	

1305-18

5 1 SL PTO

120	QC2- Inspect parts off machine FAI/FAIB	0.00
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120

QC	Memo	0.00
Quality Control		

13-05-18

5 1 SL

NCR: Yes / No

WORK ORDER NON-CONFORMANCE / UPDATE

DQA *Ant* Date: 13/06/07QA Closed: *CR* Date: 13/5/21

Work Order: <u>100850</u>				DISPOSITION		AGAINST DEPARTMENT/PROCESS							
Part No. <u>D4103-1</u>				Rework <input type="checkbox"/>		Skid-tube <input type="checkbox"/>		Crosstube <input type="checkbox"/>		Water Jet <input type="checkbox"/>		Engineering <input type="checkbox"/>	
NCR No. <u>13.2022</u>				Scrap <input checked="" type="checkbox"/>		Machining <input checked="" type="checkbox"/>		Small Fab <input type="checkbox"/>		Prod. Eng. Coord. <input type="checkbox"/>		Quality <input type="checkbox"/>	
				Use-as-is <input type="checkbox"/>		Thermoforming <input type="checkbox"/>		Finishing <input type="checkbox"/>		Rec/Store/Packaging <input type="checkbox"/>		Other <input type="checkbox"/>	
				Work Order Update <input type="checkbox"/>		Large Fab <input type="checkbox"/>		Composite <input type="checkbox"/>		Supplier <input type="checkbox"/>			

Root Cause	Date	Step	Qty	Description of work order update or Non-conformance	Initial Chief Eng	Action Description	Sign & Date	Verification	QC Inspector
Doc/Data <input type="checkbox"/>	13/5/17	110	1	Gauge on inner surface.	<i>CP</i> 13/5/17	No effect on strength, but cosmetically doesn't look acceptable. SCRAP.	<i>SL</i> 13-5-17	<i>ant</i> 13/05/20	<i>S</i> 13/5/22
Equip/Tooling <input type="checkbox"/>									
Operator <input checked="" type="checkbox"/>									
Material <input type="checkbox"/>									
Setup <input type="checkbox"/>									
Other <input type="checkbox"/>									
Process <input type="checkbox"/>									
Supplier <input type="checkbox"/>									
Training <input type="checkbox"/>									
Unapproved <input type="checkbox"/>									

FAULT CATEGORY			
Landing Gear		General	
<input type="checkbox"/> Bending	<input type="checkbox"/> Bend	<input type="checkbox"/> Grain	<input type="checkbox"/> Ovalized
<input type="checkbox"/> Centre Not Concentric to O/S	<input type="checkbox"/> BOM/Route	<input type="checkbox"/> Hardware	<input type="checkbox"/> Over/Under tolerance
<input type="checkbox"/> Cracks	<input type="checkbox"/> Broken/Damaged	<input type="checkbox"/> Inspection Incomplete	<input type="checkbox"/> Part Incorrect
<input type="checkbox"/> Crushed/Crimped	<input type="checkbox"/> Burrs	<input type="checkbox"/> Instructions Incomplete/Unclear	<input type="checkbox"/> Part Lost/Missing
<input type="checkbox"/> Cuffs	<input type="checkbox"/> Contamination	<input type="checkbox"/> Maintenance	<input type="checkbox"/> Part Moved
<input type="checkbox"/> Heat Treat	<input type="checkbox"/> Countersink	<input type="checkbox"/> Mislabelled	<input type="checkbox"/> Positioned Wrong
<input type="checkbox"/> Inspection Strip in Tube	<input type="checkbox"/> Cut Too Short	<input type="checkbox"/> Misread	<input type="checkbox"/> Power Loss/Surge
<input type="checkbox"/> Ripples in Bend	<input type="checkbox"/> Drill Holes	<input type="checkbox"/> Offset	<input type="checkbox"/> Pressure/Forced
<input type="checkbox"/> Torque Waves in Extrusion	<input type="checkbox"/> Drawing	<input type="checkbox"/> Out of Calibration	<input type="checkbox"/> Temperature/Cure
<input type="checkbox"/> Turning Sequence	<input type="checkbox"/> Finish	<input type="checkbox"/> Out of Sequence	<input type="checkbox"/> Weld
<input type="checkbox"/> Wave/Twist in Tube	<input type="checkbox"/> Folio	<input type="checkbox"/> Outside Dimensions	<input type="checkbox"/> Wrong Stock Pulled
			<input type="checkbox"/> Other

Work Order ID 100850

100850

Page 2

May-01-13 7:30:34 AM

Item ID: D4103-1

Accept

N900040100

Setup Start *NS1*

Revision ID:

Stop *NS2*

Item Name: Step / Handle

Start Date: 4/25/13

Start Qty: 5.00

5

Cust Item ID:

Required Date: 4/30/13

Req'd Qty: 5.00

5

Customer:

Reference:

Run Start *NR1*

Approvals:

Process Plan:

Date:

Tooling:

Date:

Stop *NR2*

QC:

Date:

SPC (Y/N):

Date:

Sequence ID/
Work Center ID

Operation
Description

Set Up/
Run Hours

Tool ID

Tool #

Plan
Code

Accept
Qty

Reject
Qty

Reject
Number

Insp.
Stamp

130

QC8- Inspect parts - second check

0.00

130

QC

Memo

0.00

Quality Control

OK 13/05/20

5 1

140

Chemical Conversion Coat per QS1005 4.1

0.00

140

HandFinish

Memo

0.00

Hand Finishing

5 13-5 27

150

QC3- Inspect Part Finish

0.00

150

QC

Memo

0.00

Quality Control

AS 21

13-5 27

5

NCR: Yes / No

WORK ORDER NON-CONFORMANCE / UPDATE

DQA: _____ Date: _____

QA Closed: _____ Date: _____

Work Order: _____ Part No. _____ NCR No. _____	DISPOSITION Rework <input type="checkbox"/> Scrap <input type="checkbox"/> Use-as-is <input type="checkbox"/> Work Order Update <input type="checkbox"/>	AGAINST DEPARTMENT/PROCESS <table style="width: 100%;"> <tr> <td>Skid-tube <input type="checkbox"/></td> <td>Crosstube <input type="checkbox"/></td> <td>Water Jet <input type="checkbox"/></td> <td>Engineering <input type="checkbox"/></td> </tr> <tr> <td>Machining <input type="checkbox"/></td> <td>Small Fab <input type="checkbox"/></td> <td>Prod. Eng. Coord. <input type="checkbox"/></td> <td>Quality <input type="checkbox"/></td> </tr> <tr> <td>Thermoforming <input type="checkbox"/></td> <td>Finishing <input type="checkbox"/></td> <td>Rec/Store/Packaging <input type="checkbox"/></td> <td>Other <input type="checkbox"/></td> </tr> <tr> <td>Large Fab <input type="checkbox"/></td> <td>Composite <input type="checkbox"/></td> <td>Supplier <input type="checkbox"/></td> <td></td> </tr> </table>	Skid-tube <input type="checkbox"/>	Crosstube <input type="checkbox"/>	Water Jet <input type="checkbox"/>	Engineering <input type="checkbox"/>	Machining <input type="checkbox"/>	Small Fab <input type="checkbox"/>	Prod. Eng. Coord. <input type="checkbox"/>	Quality <input type="checkbox"/>	Thermoforming <input type="checkbox"/>	Finishing <input type="checkbox"/>	Rec/Store/Packaging <input type="checkbox"/>	Other <input type="checkbox"/>	Large Fab <input type="checkbox"/>	Composite <input type="checkbox"/>	Supplier <input type="checkbox"/>	
Skid-tube <input type="checkbox"/>	Crosstube <input type="checkbox"/>	Water Jet <input type="checkbox"/>	Engineering <input type="checkbox"/>															
Machining <input type="checkbox"/>	Small Fab <input type="checkbox"/>	Prod. Eng. Coord. <input type="checkbox"/>	Quality <input type="checkbox"/>															
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Large Fab <input type="checkbox"/>	Composite <input type="checkbox"/>	Supplier <input type="checkbox"/>																

Root Cause	Date	Step	Qty	Description of work order update or Non-conformance	Initial Chief Eng	Action Description	Sign & Date	Verification	QC Inspector
Doc/Data									
Equip/Tooling									
Operator									
Material									
Setup									
Other									
Process									
Supplier									
Training									
Unapproved									

FAULT CATEGORY

Landing Gear	General	Other
<input type="checkbox"/> Bending	<input type="checkbox"/> Bend	<input type="checkbox"/> Grain
<input type="checkbox"/> Centre Not Concentric to O/S	<input type="checkbox"/> BOM/Route	<input type="checkbox"/> Hardware
<input type="checkbox"/> Cracks	<input type="checkbox"/> Broken/Damaged	<input type="checkbox"/> Inspection Incomplete
<input type="checkbox"/> Crushed/Crimped	<input type="checkbox"/> Burrs	<input type="checkbox"/> Instructions Incomplete/Unclear
<input type="checkbox"/> Cuffs	<input type="checkbox"/> Contamination	<input type="checkbox"/> Maintenance
<input type="checkbox"/> Heat Treat	<input type="checkbox"/> Countersink	<input type="checkbox"/> Mislabelled
<input type="checkbox"/> Inspection Strip in Tube	<input type="checkbox"/> Cut Too Short	<input type="checkbox"/> Misread
<input type="checkbox"/> Ripples in Bend	<input type="checkbox"/> Drill Holes	<input type="checkbox"/> Offset
<input type="checkbox"/> Torque Waves in Extrusion	<input type="checkbox"/> Drawing	<input type="checkbox"/> Out of Calibration
<input type="checkbox"/> Turning Sequence	<input type="checkbox"/> Finish	<input type="checkbox"/> Out of Sequence
<input type="checkbox"/> Wave/Twist in Tube	<input type="checkbox"/> Folio	<input type="checkbox"/> Outside Dimensions
		<input type="checkbox"/> Ovalized
		<input type="checkbox"/> Over/Under tolerance
		<input type="checkbox"/> Part Incorrect
		<input type="checkbox"/> Part Lost/Missing
		<input type="checkbox"/> Part Moved
		<input type="checkbox"/> Positioned Wrong
		<input type="checkbox"/> Power Loss/Surge
		<input type="checkbox"/> Pressure/Forced
		<input type="checkbox"/> Temperature/Cure
		<input type="checkbox"/> Weld
		<input type="checkbox"/> Wrong Stock Pulled
		<input type="checkbox"/> Other

Work Order ID 100850

100850

Page 3

May-01-13 7:30:34 AM

Item ID: D4103-1

Accept

N900040100

Setup Start *NS1*

Revision ID:

Stop *NS2*

Item Name: Step / Handle

Start Date: 4/25/13 Start Qty: 5.00 *5*

Cust Item ID:

Required Date: 4/30/13 Req'd Qty: 5.00 *5*

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Reference:

Approvals: Process Plan: _____ Date: _____ Tooling: _____ Date: _____

Run Start *NR1*

QC: _____ Date: _____ SPC (Y/N): _____ Date: _____

Stop *NR2*

Sequence ID/ Work Center ID	Operation Description	Set Up/ Run Hours	Tool ID	Tool #	Plan Code	Accept Qty	Reject Qty	Reject Number	Insp. Stamp
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160

Identify as per dwg & Stock Location: _____

0.00

160

Packaging

Memo

0.00

Packaging

ST 237 M.H.D. 5X 13/05/29

170

QC21- Final Inspection - Work Order Release

0.00

170

QC

Memo

0.00

Quality Control

13/5/29

MF 13-5-29

NCR: Yes / No

WORK ORDER NON-CONFORMANCE / UPDATE

DQA: _____ Date: _____

QA Closed: _____ Date: _____

Work Order: _____ Part No. _____ NCR No. _____	DISPOSITION Rework <input type="checkbox"/> Scrap <input type="checkbox"/> Use-as-is <input type="checkbox"/> Work Order Update <input type="checkbox"/>	AGAINST DEPARTMENT/PROCESS <table style="width: 100%;"> <tr> <td>Skid-tube <input type="checkbox"/></td> <td>Crosstube <input type="checkbox"/></td> <td>Water Jet <input type="checkbox"/></td> <td>Engineering <input type="checkbox"/></td> </tr> <tr> <td>Machining <input type="checkbox"/></td> <td>Small Fab <input type="checkbox"/></td> <td>Prod. Eng. Coord. <input type="checkbox"/></td> <td>Quality <input type="checkbox"/></td> </tr> <tr> <td>Thermoforming <input type="checkbox"/></td> <td>Finishing <input type="checkbox"/></td> <td>Rec/Store/Packaging <input type="checkbox"/></td> <td>Other <input type="checkbox"/></td> </tr> <tr> <td>Large Fab <input type="checkbox"/></td> <td>Composite <input type="checkbox"/></td> <td>Supplier <input type="checkbox"/></td> <td></td> </tr> </table>	Skid-tube <input type="checkbox"/>	Crosstube <input type="checkbox"/>	Water Jet <input type="checkbox"/>	Engineering <input type="checkbox"/>	Machining <input type="checkbox"/>	Small Fab <input type="checkbox"/>	Prod. Eng. Coord. <input type="checkbox"/>	Quality <input type="checkbox"/>	Thermoforming <input type="checkbox"/>	Finishing <input type="checkbox"/>	Rec/Store/Packaging <input type="checkbox"/>	Other <input type="checkbox"/>	Large Fab <input type="checkbox"/>	Composite <input type="checkbox"/>	Supplier <input type="checkbox"/>	
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Root Cause	Date	Step	Qty	Description of work order update or Non-conformance	Initial Chief Eng	Action Description	Sign & Date	Verification	QC Inspector
Doc/Data									
Equip/Tooling									
Operator									
Material									
Setup									
Other									
Process									
Supplier									
Training									
Unapproved									

FAULT CATEGORY

Landing Gear	General	Other
<input type="checkbox"/> Bending	<input type="checkbox"/> Bend	<input type="checkbox"/> Grain
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		<input type="checkbox"/> Pressure/Forced
		<input type="checkbox"/> Temperature/Cure
		<input type="checkbox"/> Weld
		<input type="checkbox"/> Wrong Stock Pulled
		<input type="checkbox"/> Other

Picklist Print

May-01-13 7:30:34 AM

Page 1

Work Order ID: 100850

Parent Item: D4103-1

Parent Item Name: Step / Handle

Start Date: 4/25/13

Required Date: 4/30/13

Start Qty: 5.00

Required Qty: 5.00

Comments: IPP REV: A NEW ISSUE 10-07-01 JLM VERIFIED BY:DD

Component Item ID/ Item Name	Replacement Item ID	Mfg/ Purch	Bin Item	Primary Location	Last Location	Route Seq ID	Unit of Measure	Qty on Hand	Qty per Kit	Total Qty	Qty Issued	Date Issued	Status
M6061T6B2.000X03.500 6061-T6 Bar 2.00 x 3.50		Purchased	No			100	f	8.7134	0.52	2.736842		SL 13-5-13	

Location

Loc Qty

Loc Code

MAT009

8.7134

112764

1.4568

118182

5.6739

121660

1.5827

125592

2.8

NCR: Yes / No

WORK ORDER NON-CONFORMANCE / UPDATE

DQA: _____ Date: _____

QA Closed: _____ Date: _____

Work Order: _____ Part No. _____ NCR No. _____	DISPOSITION Rework <input type="checkbox"/> Scrap <input type="checkbox"/> Use-as-is <input type="checkbox"/> Work Order Update <input type="checkbox"/>	AGAINST DEPARTMENT/PROCESS <table style="width: 100%;"> <tr> <td>Skid-tube <input type="checkbox"/></td> <td>Crosstube <input type="checkbox"/></td> <td>Water Jet <input type="checkbox"/></td> <td>Engineering <input type="checkbox"/></td> </tr> <tr> <td>Machining <input type="checkbox"/></td> <td>Small Fab <input type="checkbox"/></td> <td>Prod. Eng. Coord. <input type="checkbox"/></td> <td>Quality <input type="checkbox"/></td> </tr> <tr> <td>Thermoforming <input type="checkbox"/></td> <td>Finishing <input type="checkbox"/></td> <td>Rec/Store/Packaging <input type="checkbox"/></td> <td>Other <input type="checkbox"/></td> </tr> <tr> <td>Large Fab <input type="checkbox"/></td> <td>Composite <input type="checkbox"/></td> <td>Supplier <input type="checkbox"/></td> <td></td> </tr> </table>	Skid-tube <input type="checkbox"/>	Crosstube <input type="checkbox"/>	Water Jet <input type="checkbox"/>	Engineering <input type="checkbox"/>	Machining <input type="checkbox"/>	Small Fab <input type="checkbox"/>	Prod. Eng. Coord. <input type="checkbox"/>	Quality <input type="checkbox"/>	Thermoforming <input type="checkbox"/>	Finishing <input type="checkbox"/>	Rec/Store/Packaging <input type="checkbox"/>	Other <input type="checkbox"/>	Large Fab <input type="checkbox"/>	Composite <input type="checkbox"/>	Supplier <input type="checkbox"/>	
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Root Cause	Date	Step	Qty	Description of work order update or Non-conformance	Initial Chief Eng	Action Description	Sign & Date	Verification	QC Inspector
Doc/Data									
Equip/Tooling									
Operator									
Material									
Setup									
Other									
Process									
Supplier									
Training									
Unapproved									

FAULT CATEGORY

Landing Gear	General	Other
<input type="checkbox"/> Bending	<input type="checkbox"/> Bend	<input type="checkbox"/> Grain
<input type="checkbox"/> Centre Not Concentric to O/S	<input type="checkbox"/> BOM/Route	<input type="checkbox"/> Hardware
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		<input type="checkbox"/> Pressure/Forced
		<input type="checkbox"/> Temperature/Cure
		<input type="checkbox"/> Weld
		<input type="checkbox"/> Wrong Stock Pulled
		<input type="checkbox"/> Other

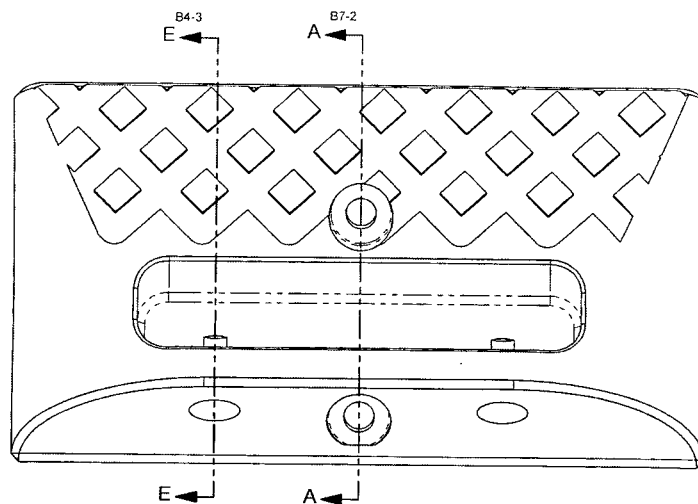
DART AEROSPACE LTD		Work Order:	100850
Description: Step/Handle		Part Number:	D4103-1
Inspection Dwg: D4103 Rev: A		Page 1 of 1	

FIRST ARTICLE INSPECTION CHECKLIST

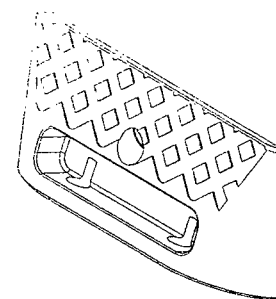
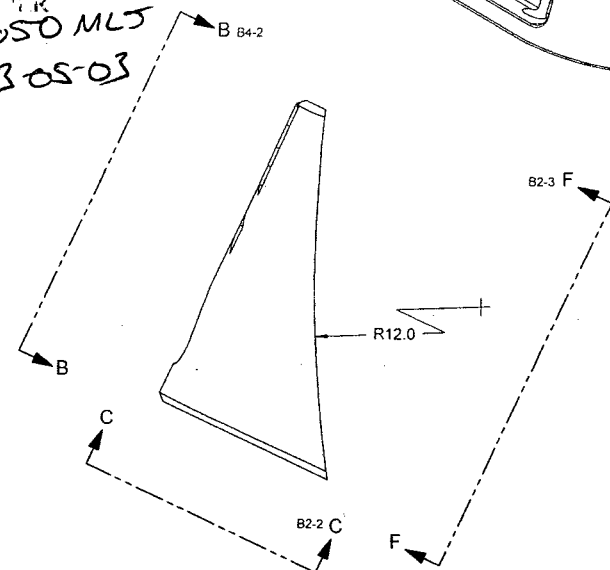
Drawing Dimension	Tolerance	Actual Dimension	Accept	Reject	Method of Inspection	Comments
2.93	+/-0.030	2.930	/		Vern	SL-10
0.37	+/-0.030	0.370	/		-	
0.83	+/-0.030	0.829	/		-	
Ø0.560	+/-0.010	0.559	/		-	
0.06 X 45°	+/-0.030 X +/-0.5°	0.06 X 45°	/		-	
0.26	+/-0.030	0.265	/		-	
0.33	+/-0.030	0.331	/		mic	118-120
R0.06	+/-0.030	0.060	/		R-G	
1.78	+/-0.030	1.780	/		HG	
0.45	+/-0.030	0.451	/		-	
0.33	+/-0.030	0.330	/		mic	118-120
0.75	+0.000/-0.030	0.738	/		Vern	SL-10
1.66	+/-0.030	1.660	/		-	
0.80	+/-0.030	0.785	/		-	
1.07	+/-0.030	1.075	/		-	
3.85	+/-0.030	3.850	/		-	
0.03 X 45°	+/-0.030 X +/-0.5°	0.03 X 45°	/		-	
0.31	+/-0.030	0.308	/		-	
0.28	+/-0.030	0.281	/		-	
0.030 Deep	+/-0.030	0.030	/		-	
6.00	+/-0.030	5.990	/		-	
R0.27	+/-0.030	0.27	/		-	
0.56	+/-0.030	0.556	/		-	
1.74	+/-0.030	1.750	/		-	
2.50	+/-0.030	2.500	/		-	
Ø0.438	+0.006/-0.001	0.439	/		-	
Ø0.266	+0.006/-0.001	0.267	/		-	
0.96	+/-0.030	0.963	/		HG	
0.26	+/-0.030	0.264	/		mic	SL-4
0.25	+/-0.030	0.247	/		Vern	SL-10
2.25	+/-0.030	2.250	/		-	
1.00	+/-0.030	1.000	/		-	
0.20	+/-0.030	0.204	/		-	
0.98	+/-0.030	0.980	/		-	
0.32	+/-0.030	0.318	/		-	
1.25	+/-0.030	1.250	/		-	
R0.19	+/-0.030	0.19	/		-	

Measured by: SL	Audited by: <i>my</i>	Preliminary Approval:
Date: 13-5-17	Date: 13/05/20	Date:

Rev	Date	Change	Revised by	Approved
A	10.10.07	New Issue	KJ <i>[Signature]</i>	<i>[Signature]</i>



100850 MLT
BOS-03



D4103-1 STEP/HANDLE

NOTES:

- 1) MATERIAL: 6061-T6/T651/T6510/T6511/T62 ALUMINUM BAR
PER QQ-A-225/8 OR AMS-QQ-A-225/8 (OR AMS 4117/4128/4115/4116)
OR QQ-A-200/8 OR AMS-QQ-A-200/8 (OR AMS 4160)
OR ASTM B211 OR ASTM B221
- 2) FINISH: CHEMICAL CONVERSION COAT PER DART QSI 005 4.1
- 3) TOLERANCES: PER DART QSI 018 UNLESS OTHERWISE NOTED
- 4) UNITS: INCHES UNLESS OTHERWISE NOTED
- 5) BREAK SHARP EDGES: 0.005 TO 0.010 MAX
- 6) IDENTIFICATION: IDENTIFY WITH DART P/N "D4103-1" USING FINE POINT PERMANENT INK MARKER
- 7) WEIGHT: 0.81 lbs
- 8) MACHINE 0.28 x 0.31 GRIP 0.030 DEEP AT 45° PATTERN 0.25 APART

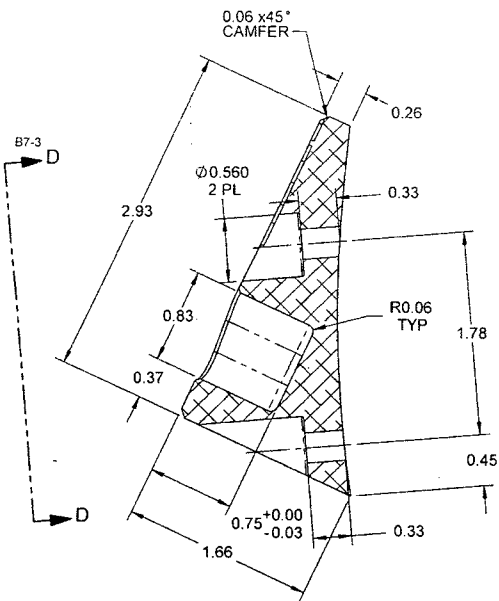
RELEASED
2010-08-23
JWP

A NEW ISSUE		RF	10.05.17
REV.	DESCRIPTION	BY	DATE
DESIGN	RF		
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CHECKED	RF		
MFG. APPR.	RF		
APPROVED	RF		
DE APPR.	RF		
DATE	10.05.17		

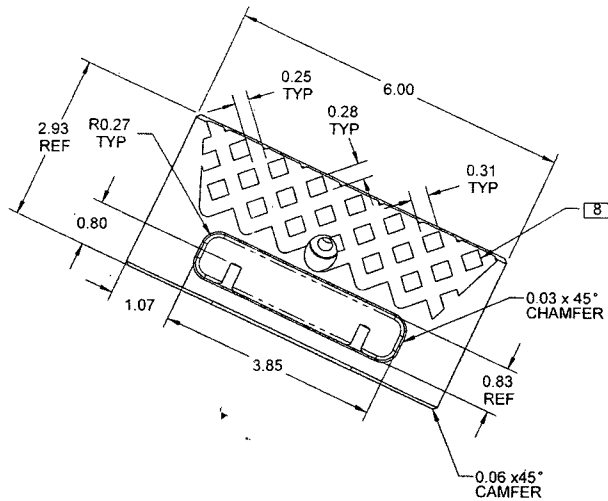
DART AEROSPACE LTD HAWKESBURY, ONTARIO, CANADA	
DRAWING NO. D4103	REV. A
TITLE STEP/HANDLE	SHEET 1 OF 3
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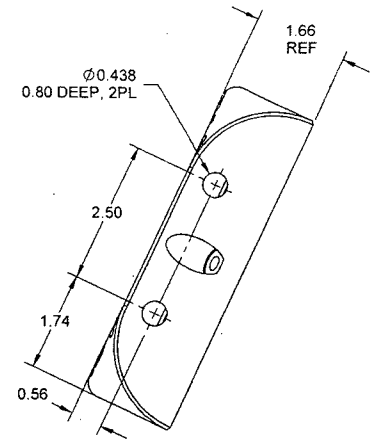
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SECTION A-A D6-1



VIEW B-B D3-1
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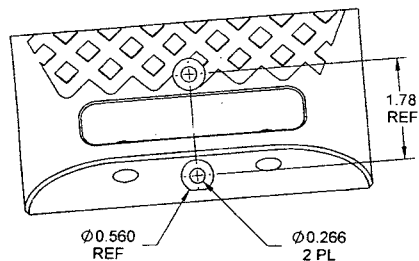


VIEW C-C B2-1
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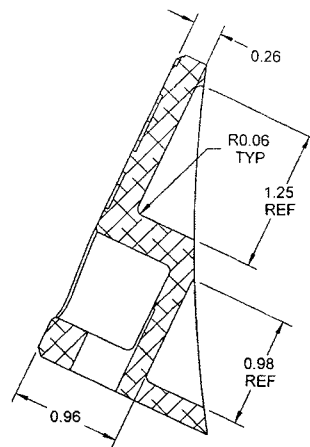
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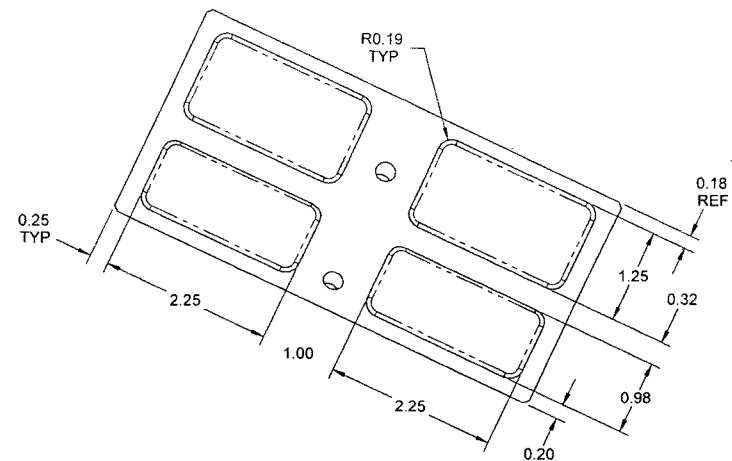
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VIEW D-D C8-2
SCALE 0.5X



VIEW E-E D7-1



VIEW F-F C1-1

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